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Snap chin strap for motorcyclist's safety helmet - has buckle of chin strap engageable with snap fastening enclosed in receptacle in helmet shell

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The safety helmet chin strap is formed in one piece, with one end of the strap secured to a projection on the inside of the helmet shell. The other strap end carries a buckle (15) which directly engages a snap fastening formed directly and enclosed in a receptacle (8) in the helmet shell (2).

The first strap end can have a further buckle with a hole to engage a projection on the inside of the shell and retained by a snap ring. The projection is contained within the thickness of the shell, being moulded in place. The fastening is easily operated with one hand. (10pp Dwg.No.5/5)

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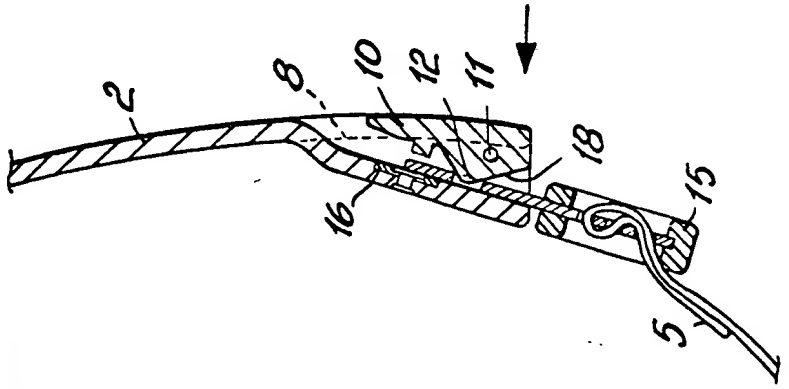

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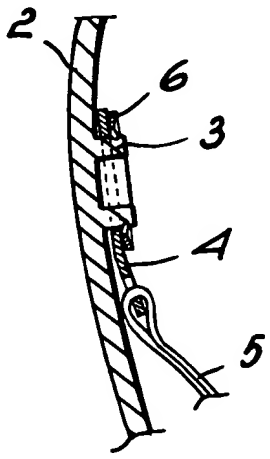
(54) Improved snap chin strap for crash helmets.

(57) The chin strap is effective to be attached with one end to a projection (3) inside a crash helmet by means of a buckle (4), the snap fastener consisting of a receptacle (8) formed directly in the helmet outer shell (2), whereto a lever (10) actuated dog (12), is pinned pivotally to allow a second buckle (15) to be locked thereby.

The strap snap fastener (9) is fastened with the intermediary of a flat spring (16).



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This invention relates to an improved snap fastenable chin strap for crash helmets.

Crash helmets, and in particular head enclosing helmets for motorcyclists, are equipped with a chin strap to secure the helmet in a reliable manner to the motorcyclist's head.

Such chin straps are usually formed in two parts, which are interconnected by a strap fastening device.

Conventional chin strap fastening devices are, however, inconvenient to use in that both hands have to be used to operate them.

An added source of inconvenience comes from the actuation itself of such prior fasteners which, being generally small in size, are not easily controlled to fasten and release the chin strap.

Thus the task of this invention is to provide a chin strap which can overcome the problems and limitations affecting comparable prior devices.

Within this task it is an object of the invention to provide a chin strap which is a single-piece construction with connection devices which are directly associated with the helmet structure.

A further object of the invention is to provide a connection device which can be readily operated with one hand.

The above task and objects as well as yet other objects, such as will be apparent hereinafter, are achieved by an improved snap chin strap for crash helmets, characterized in that it comprises a chin strap formed as a single piece, one

end of said chin strap being effective to be secured to a projection provided on the helmet shell inside, and the other end thereof carrying a buckle adapted to engage with a snap fastening device formed directly and enclosed in a receptacle on said helmet shell.

Further features and advantages of the invention will be more clearly understood from the following detailed description of a preferred embodiment thereof, given herein by way of example only with reference to the accompanying drawings, where:

Figure 1 is a partly sectional view of a crash helmet showing the attachment of the chin strap fixed end to the helmet shell;

Figure 2 is a sectional view through the attachment of Figure 1;

Figure 3 is a partly sectional view showing the area of the helmet shell with the snap fastening device;

Figure 4 is a side view of the snap fastening device;

Figure 5 is a sectional view of the inventive snap fastening device taken along the line V-V of Figure 4; and

Figure 6 is a sectional view of the snap fastening device taken along the line VI-VI of Figure 4.

With reference to the drawing illustrations, on the inside area or interior of a motorcyclist helmet 1, a projection 3 is molded, on one side of the shell 2,

which is intended to accommodate a buckle 4 associated with a first end of the strap 5.

In order to retain at all times the connection between the buckle 4 and projection 3, a snap ring 6, of the so-called "seeger" type, is force fitted on the latter.

With such a connection device, which is fully enclosed within the helmet inner liner 7, no through-going locking rivets need be provided.

On the opposed side of the helmet shell 2, a receptacle 8 is formed which opens outwardly and is intended for containing the snap fastening device 9.

Said device comprises a lever 10 secured to the walls of the receptacle 8 by means of a pivot pin 11.

The lever 10 is provided, at the middle area thereof, with a tooth or dog 12 which engages in a seat or opening 13 formed on a blade-like lug 14 of a second, adjustable buckle 15, which is provided at the free end of the chin strap 5.

The engagement pressure for the dog 12 is supplied by a flat spring 16 acting on two cams 17, formed laterally on the lever 10.

In practice, by pulling the lever 10 outwards, the buckle 15 is released and the spring 16 deflected, which tends to return the lever 10 to its engagement position aligned with the shell 2.

To engage, it will be sufficient to push on the buckle 10 and insert the blade-like lug 14 under the dog 12, which has a suitably sloping configuration of its leading corner edge 18, until the dog 12 snaps into the seat 13.

It will be appreciated from the foregoing description that this chin strap can be fastened and unfastened in a most quick manner using one hand to act on either the buckle or lever.

The helmet shell has no outward projections nor any rivets or other mechanical means of attachment.

The chin strap is a single piece construction with buckles only provided at its ends.

There is no potential hazard for the user because all the projections are contained within the inner liner area.

Based on this same inventive concept, other embodiments of the invention are possible without departing from the protection scope of this application.

Of course, the materials and dimensions may be selected to meet individual requirements.

CLAIMS

1. An improved snap chin strap for crash helmets, characterized in that it comprises a chin strap (5) formed as a single piece, one end of said chin strap being effective to be secured to a projection (3) provided on the helmet shell (2) inside, and the other end thereof carrying a buckle (15) adapted to engage with a snap fastening device (9) formed directly and enclosed in a receptacle (8) on said helmet shell (2).

2. An improved chin strap according to Claim 1, characterized in that said one end of said strap (5) has a further buckle (4) formed with a hole adapted to engage with a projection (3) provided on the inside of the helmet shell (2) and is retained by a snap ring (6).

3. An improved chin strap according to the preceding claims, characterized in that said projection (3) is contained within the thickness dimension of the helmet inner liner (7) and is co-molded with the helmet shell (2).

4. An improved chin strap according to the preceding claims, characterized in that said buckle (15) provided at said strap other end has a blade-like lug (14) formed with a seat (13) wherein may be inserted a dog (12) on said snap fastening device (9).

5. An improved chin strap according to one or more of the preceding claims, characterized in that said fastening device (9) comprises a lever (10) provided with said dog (12) adapted to engage into said seat (13) in said buckle (15), resilient means (16)

being also provided to bias said lever (10) toward its closed position.

6. An improved chin strap according to one or more of the preceding claims, characterized in that said receptacle (8) is formed in the helmet shell wall and co-molded therewith during the helmet shell (2) injection molding process.

7. An improved snap fastened chin strap for crash helmets, as herein claimed, described, and illustrated, for the objects specified.

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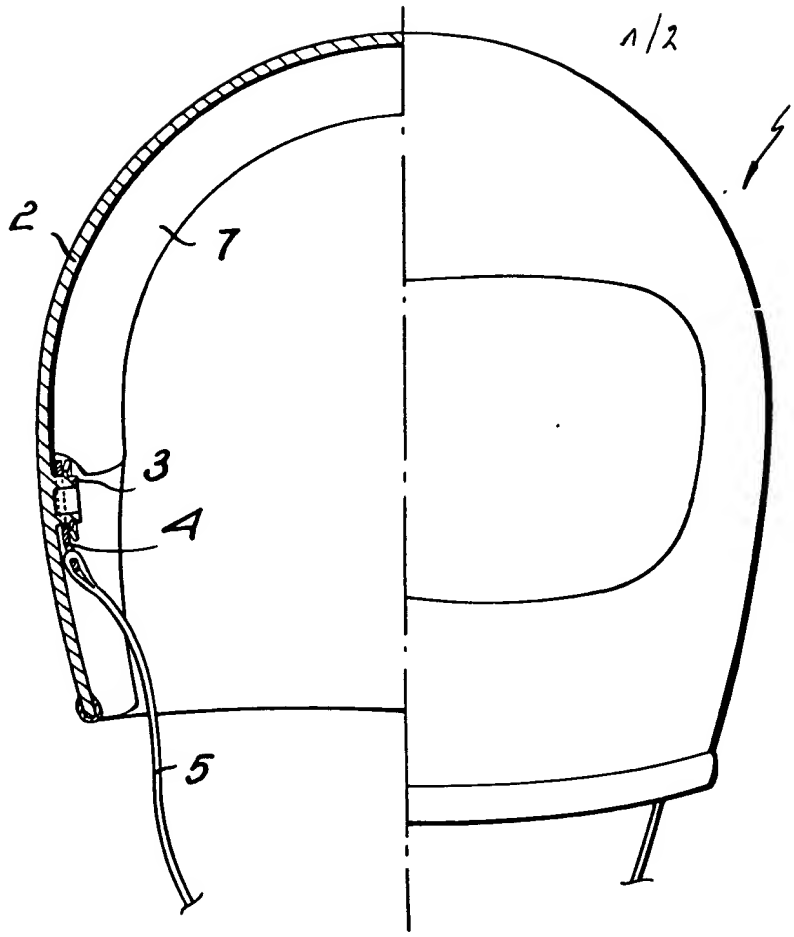

Fig.2

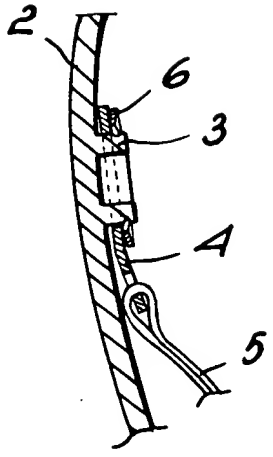

Fig.1

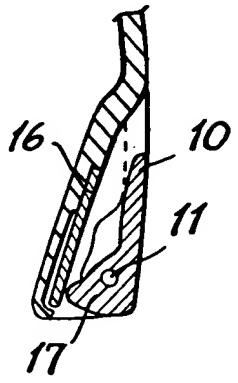

Fig.6

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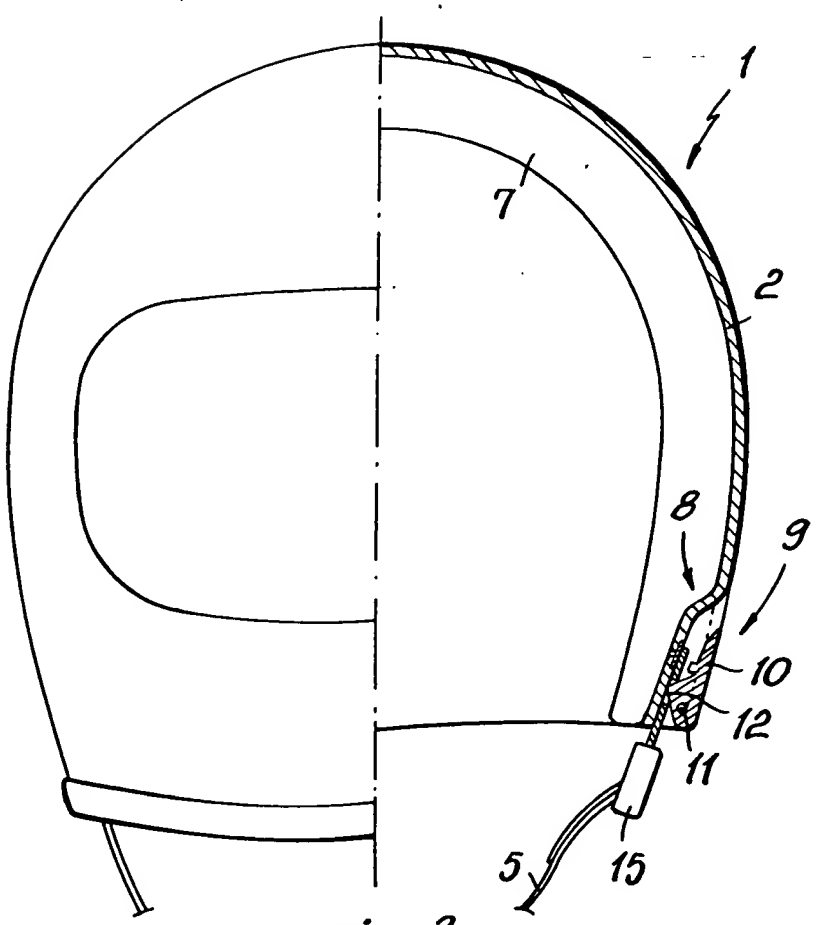

Fig.3

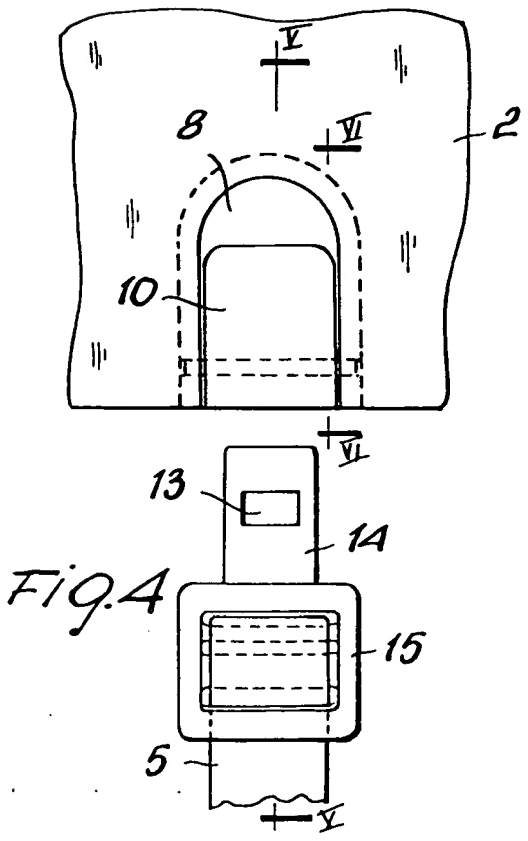

Fig.4

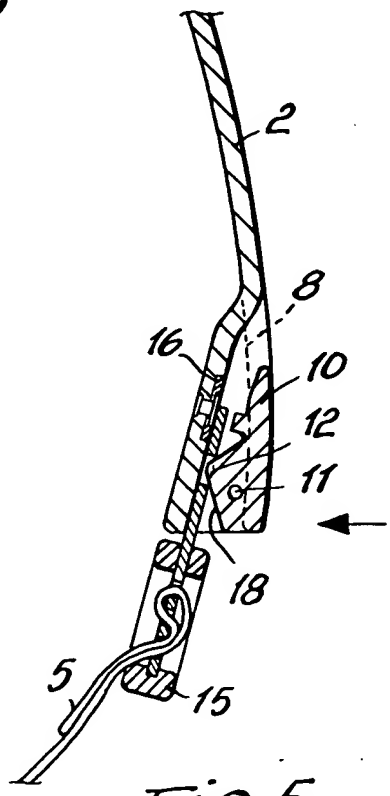

Fig.5